WHIRLPOOL AUSTRALASIA

CONSUMER SERVICES

SERVICE MANUAL

FRONT LOAD
WASHING MACHINE

Model AWM8121
Version 8570 812 53000

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This documentation is intended only for qualified technicians who possess the required qualifications and are aware of the regulatory requirements applicable to servicing electrical appliances.

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TECHNICAL DATA

Dimensions

Height	845	mm
Width	595	mm
Depth	620	mm

Weight

Nett	73	kg

Mains Connection

Voltage	230 - 240	V
Frequency	50	Hz
Power consumption	2.3	kW

Drum

Volume	53	l

Capacity of dry laundry

Cotton/coloured	7	kg
Cotton rapid	3	kg
Cotton short	6	kg
Easy care	2.5	kg
Easy care rapid	1.5	kg
Easy care short	2.5	kg
Delicate	1.5	kg
Wool	1	kg

Water Level (as sensed by the pressure switch)

Level 1		
Switching point	55± 5	mmWc
Reset point	35± 5	mmWc
Overflow	280 ± 20	mmWc

Water (level visible inside the drum)

Level 1		
Switching point	25 - 39	mm
Overflow	267 - 306	mm

Nominal currents

Contacts		
11 - 12	4 (4)	A
11 - 14	16 (4)	A
11 - 16	1 (1)	A

Door lock

Lock time (20 °C)	3 - 6	s
Unlock time	60 - 90	s
Voltage	230 - 240	V
Rated current:		
Contact 4 - 5	16 (4)	A

Heating element

Heating	Tubular heating element with NTC - sensor	
Rated Voltage	230 - 240	V
Rated power	2050	W
Resistance	22 - 28	Ω

Resistance NTC :		
0°C	35.9	κΩ
30°C	9.8	κΩ
40°C	6.6	κΩ
50°C	4.6	κΩ
60°C	3.2	κΩ
70°C	2.3	κΩ
95°C	1.1	κΩ

Inlet valve - Cold/hot fill :

Water temp (max)	60	°C
Rated flow <1 bar	4	l/min
Pressure range	50 - 1000	kPa
Nominal voltage	220 - 240	V
Frequency	50	Hz
Minimum starting voltage:		
< 600 kPa	160	V
600 - 1000 kPa	170	V
Nominal current	35	mA
Nominal input	6	VA
Nominal (20 °C)	3.4 - 4.5	κΩ

Drain pump (synchronous)

Nominal Voltage	230 - 240	V
Nominal current	0,3	A
Nominal power	34	W
Frequency	50	Hz
Resistor (coil)	155 ± 7%	Ω
Motor protection	170	°C
Capacity(H=1,25m)	14 ± 2	l/min

TECHNICAL DATA (Cont.)

Program timer

Type SC1
Timer basic 4619 712 52201
Timer programmed 4619 744 80153
Nominal voltage 230 - .240 V
Frequency 50 Hz

Harness Connectors (See circuit diagram)

OA4.1 - OA4.2	5. Option
OA4.3 - OA4.4	6. Option
OB4.1 - OB4.2	3. Option
OB4.3 - OB4.4	4. Option
OC4.1 - OC4.2	1. Option
OC4.3 - OC4.4	2. Option
SLT3.1 - SLT3.3	Temp.selector
SLS4.1 - SLS4.4	Spin speed selector
VCF3.1 - VCF3.3	Valve (cold water)
VHF3.1 - VHF3.3	Valve (hot water)
Pi5.1 =	negative supply
Pi5.2 =	data
Pi5.3 =	clock
Pi5.4 =	positive supply
Pi 5.5 =	negative supply
PL3.1 - PL3.3	Pilot lamp

Connector

M7.1 - M7.7	Motor
DP2.1 - DP2.2	Pump
SET2.1 - SET2.2	NTC
DSS3.1 - DSS3.3	Door switch
PR2.1 - PR2.2	Pressostat

Single connector

HE2.1 - HE2.2	Heating element
PS2.1 - PS2.2	Pressostat
SM3.2 - SM3.3	Mains switch (3 fold connector)

Program 32 positions

Step	Cotton / Colour	Easy care	Deli-cate	Wool	Silk
Pre wash	02-06	03-06	04-06	-	-
Main wash	07-21	12-21	14-21	17-21	18-21
Rinse	22-28	22-28	22-28	22-28	22-28
Spin	29-31	29-31	29-31	29-31	29-31
Stop	32	32	32	32	32

Speeds

Wash speed	54	rpm
Ramp speed	95	rpm
Spin speed	1200	rpm

Ambient Temperatures

Ambient temperature up to 70 °C
Storage temperature up to 85 °C

Output

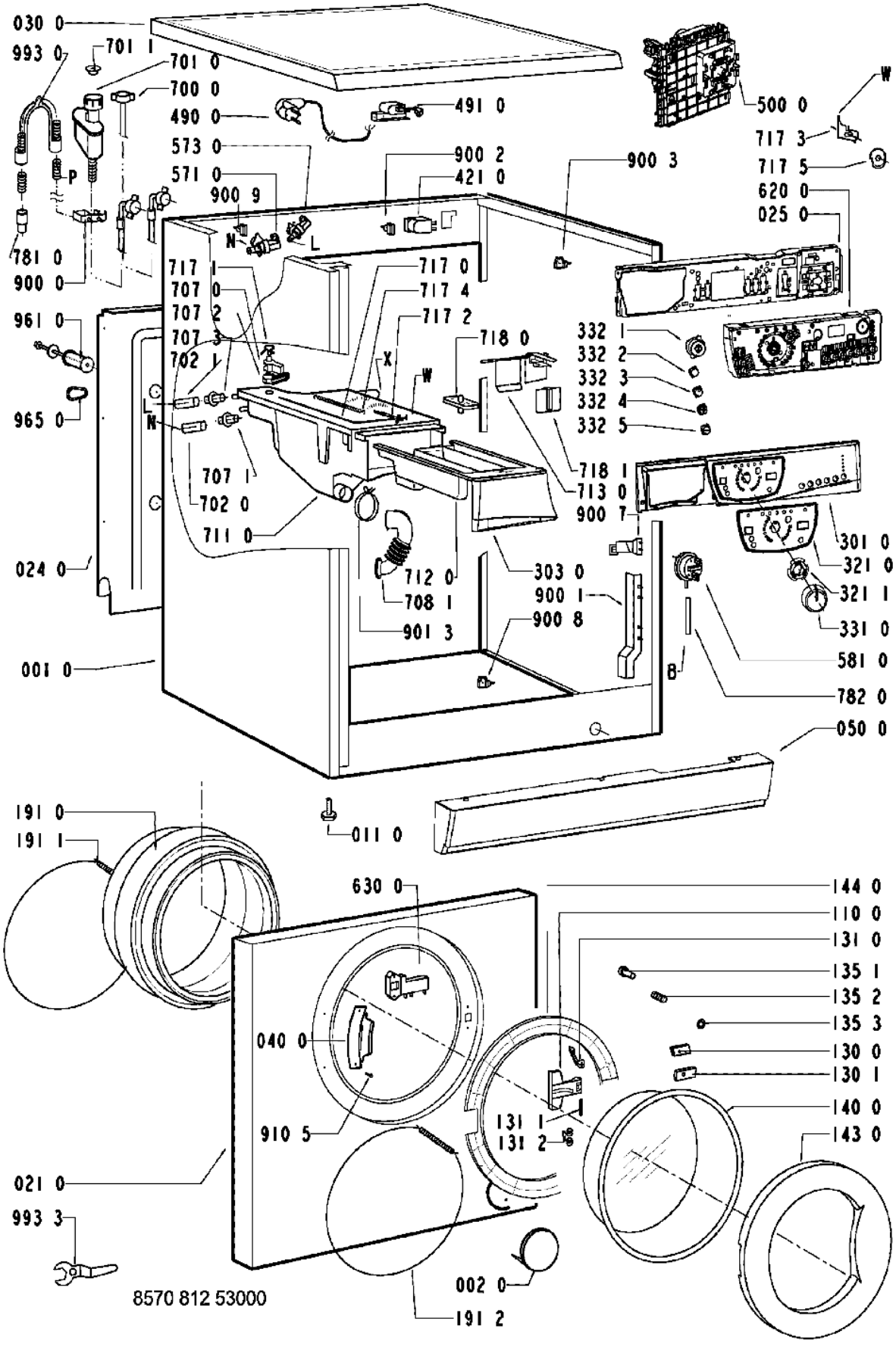
Motor M7.6 - DSS 3.2	>40	V
in pump step AQ2.1 -DSS 3.2	240	V
NTC	not measurable	
Pump DP2.1 -DP2.2	240	V
Doorlock DSS3.1 -DSS 3.3	240	V
Pressostat E4 - E2	240	V
- empty PR2.1 - E2	240	V
- full PR2.2 - E2	240	V
Valve (Rast 2,5) V2.1 - V2.2	>170	V
Options	not measurable	
Display module Pi5.1 - Pi5.	4.5	V
Pi5.4 - Pi5.5	12	V

Motor

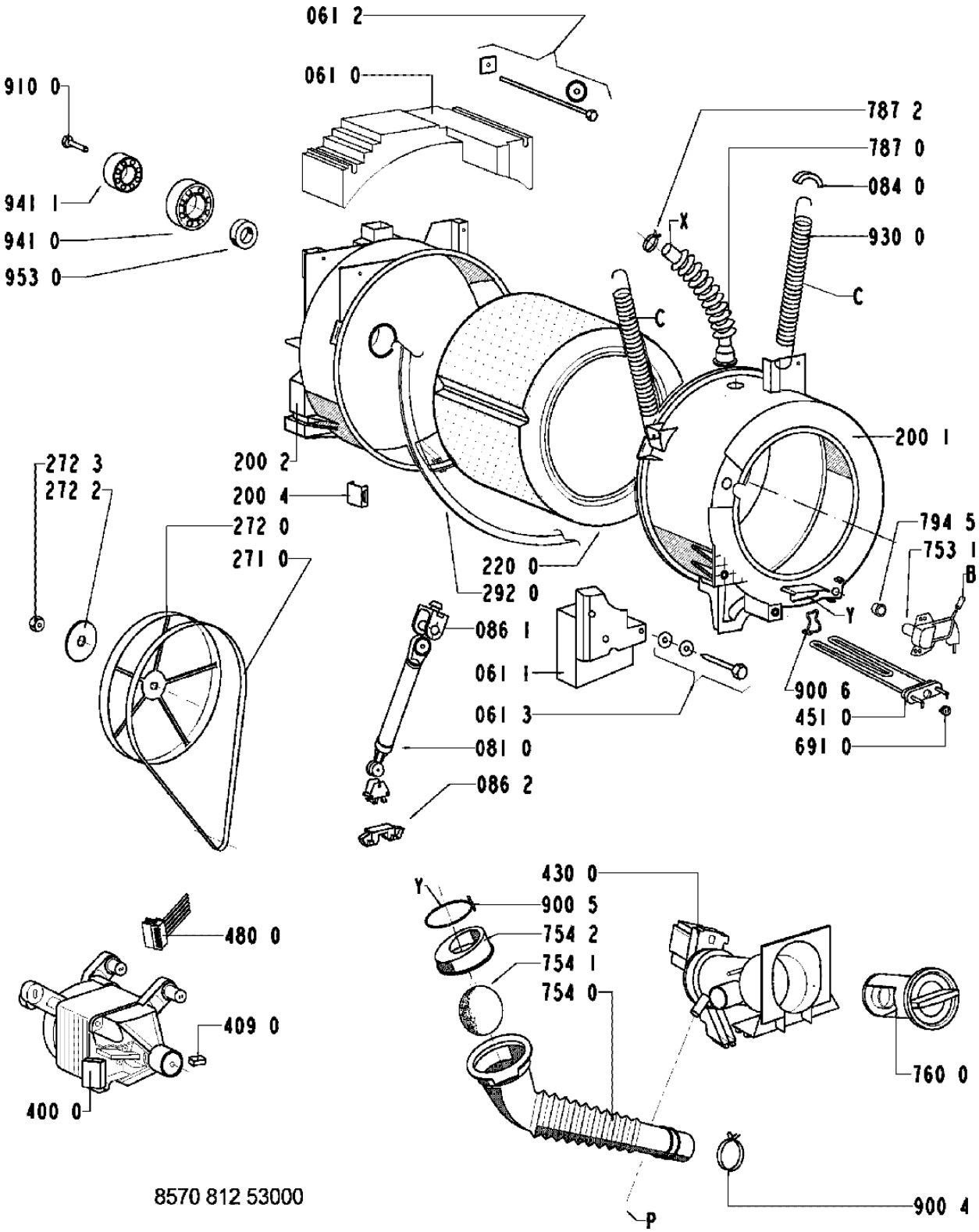
Type MCA61/64 - 148 t.f.
WHE 0
Belt ratio i = 1 : 13.3
Resistance contacts

6 - 7	68.7± 7%	Ω
4 - 5	1.78± 7%	Ω
2 - 3	1.68± 7%	Ω
1 - 3	0.99± 7%	Ω

EXPLODED VIEW - CABINET



EXPLODED VIEW - DRUM



8570 812 53000

PARTS LIST

Item	Part No	Description
001 0	4819 440 19716	Cabinet
002 0	4812 440 19343	Flap
011 0	4819 462 48472	Foot
021 0	4812 440 19818	Front
024 0	4812 440 18998	Panel, rear
025 0	4812 404 38551	Support, control board VBL WH
030 0	4812 310 18586	Table top VBL WH
040 0	4812 417 18787	Hinge
050 0	4812 440 10406	Pedestal VBL, 53 l
061 0	4812 466 88458	Counter weight, upper
061 1	4812 466 88459	Counter weight, front
061 2	4819 310 39227	Mounting kit weight, top
061 3	4819 310 39228	Mounting kit weight, bottom
081 0	4812 529 18038	Shock absorber upto 1200rpm
084 0	4812 466 58001	Anti rattle, support spring
086 1	4812 401 18413	Holder, shock absorber
086 2	4812 401 18412	Stopper
110 0	4812 498 18139	Handle, door white
130 0	4812 417 28047	Plate, door lock
130 1	4812 417 28048	Plate, doorlock lower
131 0	4812 417 28046	Lock door
131 1	4812 417 28045	Pin door lock
131 2	4812 492 58022	Spring door lock
135 1	4812 498 18137	Knob door safety
135 2	4812 491 48004	Spring
135 3	4812 290 68153	Holder, adjustable door safety
140 0	4812 450 68219	Door glass
143 0	4812 440 19782	Glassdoor frame VBL WH
144 0	4812 440 19589	Frame, door glass DE-WT
191 0	4812 460 68527	Door bellow standard
191 0	4812 460 68532	Door bellow WH grease resistance
191 1	4812 492 18017	Strap
191 2	4819 530 58059	Ring
200 1	4812 418 18283	Tub 53l front
200 2	4812 418 18305	Tub 53l rear
200 4	4812 290 88054	Clamp for tub WH
220 0	4812 418 18288	Drum 53l
271 0	4819 358 18152	Belt
272 0	4812 528 58027	Pulley DIAM.298
272 2	4812 532 18024	Washer
272 3	4812 505 18371	Nut M 12
292 0	4812 530 58101	Gasket Tub
301 0	4812 452 11085	Control panel AWM 8121
303 0	4812 498 78095	Handle
321 0	4812 452 11084	Insert panel

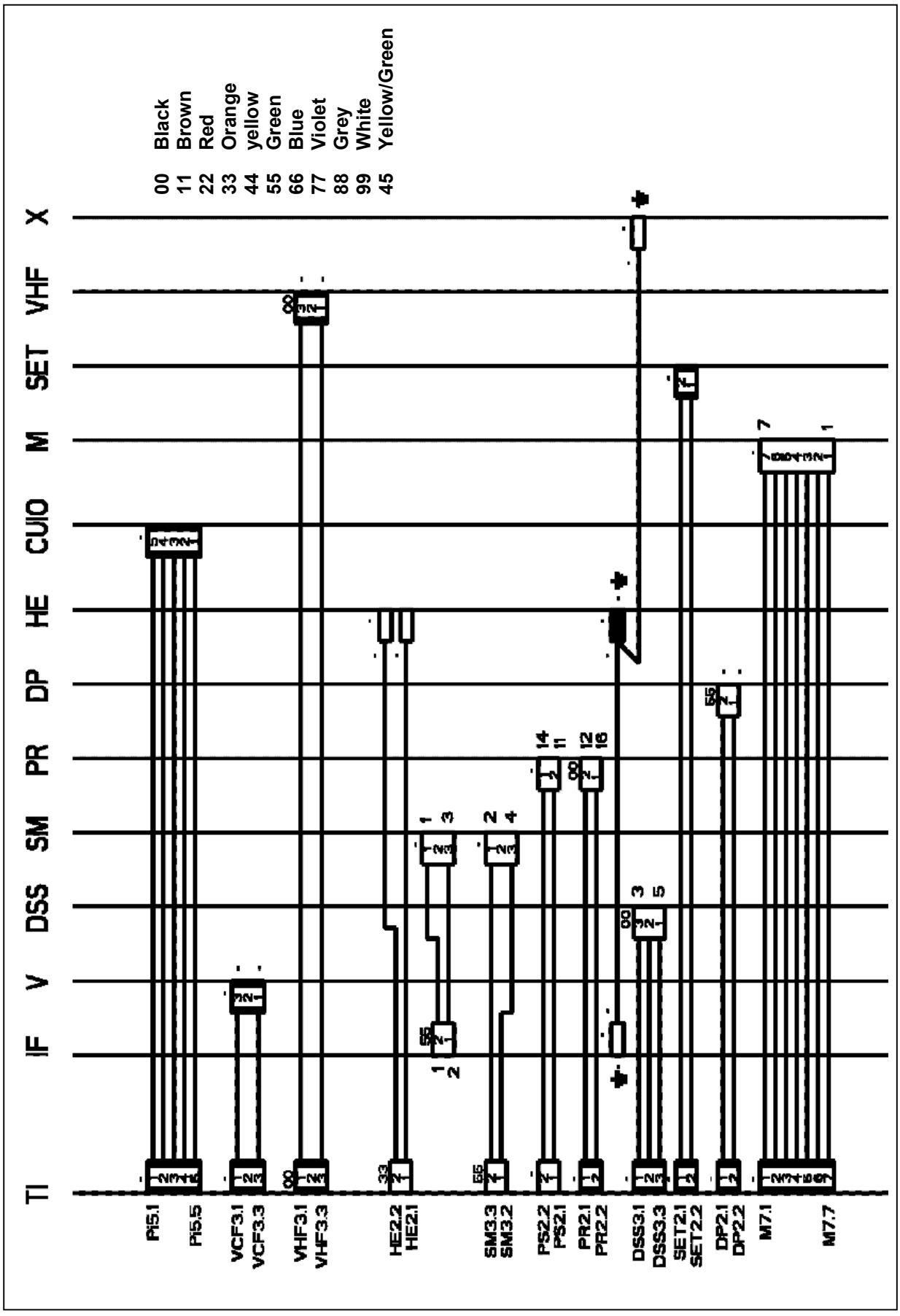
PARTS LIST (Cont.)

Item	Part No	Description
321 1	4812 532 98011	Fastener, inlay
331 0	4812 414 58111	Knob, timer VBL complete
332 1	4812 513 18097	Push button start VBL WH
332 2	4812 513 18098	Push button spin speed VBL WH
332 3	4812 513 18099	Push button option VBL WH
332 4	4812 513 18101	Push button plus VBL WH
332 5	4812 513 18102	Push button minus VBL WH
400 0	4812 361 58172	Motor 1200 MCA 61
409 0	4812 362 48004	Brush, carbon motor CESET
421 0	4812 121 18142	Interference filter, 1,00 μF
430 0	4812 310 38525	Pump, drain with thermal protection
451 0	4812 259 28766	Heating element 240V, 53l
480 0	4812 321 78109	Cable, motor SC1 PP
490 0	4812 310 18404	Kit cable, mains 5m 3x1,5
491 0	4812 321 28367	Strain relief
500 0	4812 282 18948	Timer SC1 (EI,EC,PW,IR,RH)
571 0	4812 281 28382	Valve, magnet cold
573 0	4812 271 28449	Valve, magnet hot
581 0	4812 276 18327	Pressostat 55/35
620 0	4812 239 58003	Module "A" S/DS
630 0	4812 280 58026	Door lock 3 TABS
691 0	4812 282 18702	Sensor NTC (SC1)
700 0	4812 530 28869	Hose, inlet hot
701 0	4812 530 28781	Hose, inlet 3,8 m (Eltek)
701 0	4819 530 28926	Hose, inlet 2,5 m (Eltek)
701 1	4819 466 69704	Gasket and filter
702 0	4819 530 29019	Hose intern
702 1	4819 530 28971	Hose, inlet intern
707 0	4812 526 48031	Nozzle Distribution
707 1	4812 526 48028	Nozzle
707 2	4812 526 48034	Nozzle hot
707 3	4812 526 48035	Nozzle hot
708 1	4812 530 48143	Bend
711 0	4812 418 88054	Detergent disp. 3C, 53l
712 0	4812 418 68198	Drawer 3 C. VBL
713 0	4812 418 88019	Flap Detergent Container
717 0	4812 418 78925	Bowden cable
717 1	4812 321 38013	Lever, nozzle
717 2	4812 321 38012	Holder, adjustable
717 3	4812 278 88018	Slide
717 4	4812 492 38359	Spring , nozzle
717 5	4812 282 18807	Cam 3 C. SC1/VBL/WH
718 0	4812 526 48051	Siphon
718 1	4812 418 88018	Accessory
753 1	4819 418 68234	Chamber, air

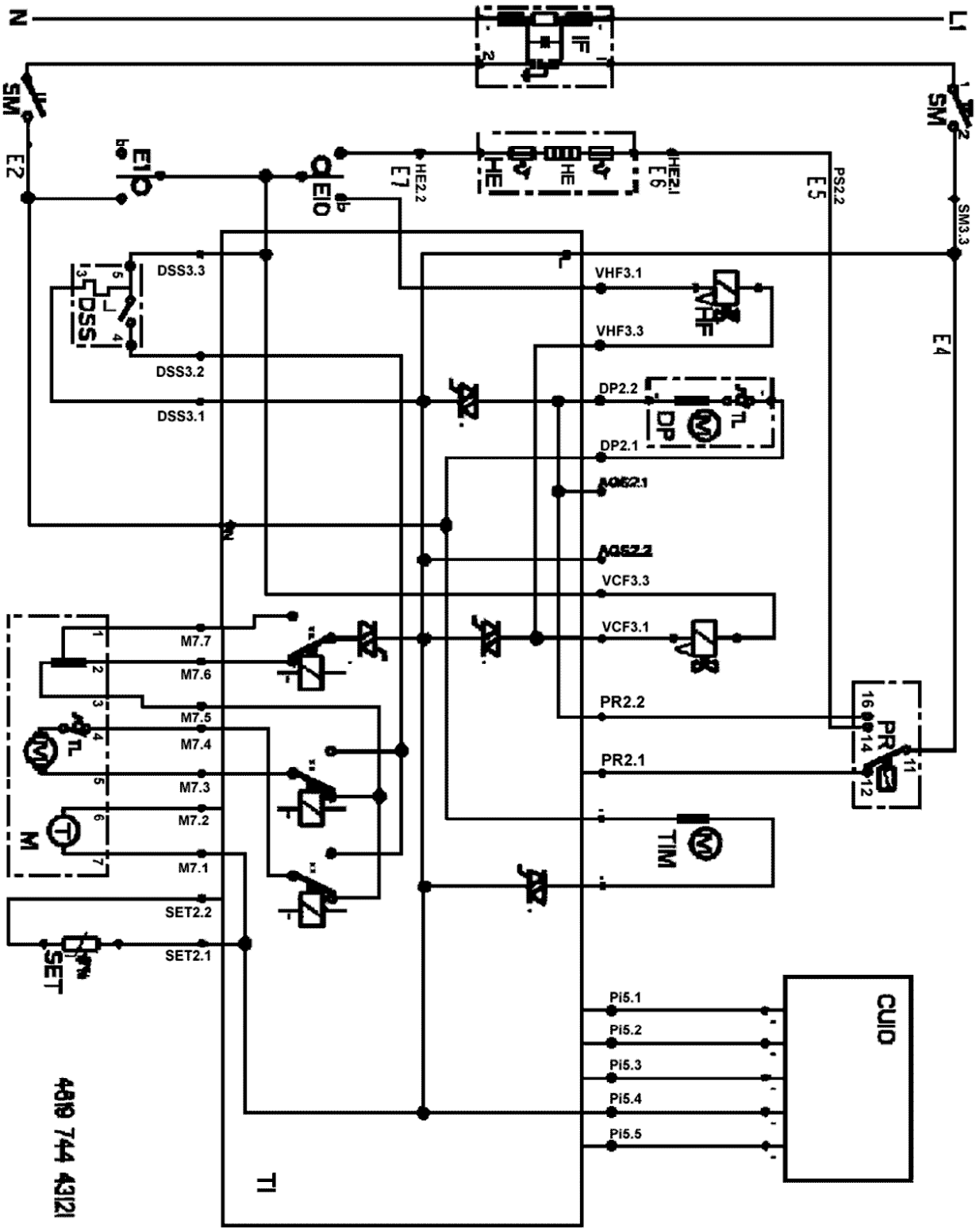
PARTS LIST (Cont.)

Item	Part No	Description
754 0	4812 530 28826	Drain hose, tub to pump
754 1	4812 530 28832	Lock eco
754 2	4812 530 28829	Flange eco
760 0	4812 480 58105	Filter set pump
781 0	4819 530 28847	Hose, draining
782 0	4812 530 28827	Hose pressostat
787 0	4812 530 28813	Steam hose
787 2	4819 401 18868	Clamp, hose 26,8 mm
794 5	4812 530 58095	Gasket air trap
900 0	4812 255 18204	Holder hose outlet
900 1	4812 290 88049	Bracket
900 2	4812 290 88077	Cable clamp
900 3	4812 401 18446	Cable clamp
900 4	4819 401 18872	Clamp, hose
900 5	4819 401 18529	Clamp, hose
900 6	4812 401 18444	Support Heating element
900 7	4812 256 98031	Holder pressostat
900 8	4819 401 18823	Clamp
900 9	4819 404 78449	Support
901 3	4812 401 18549	Clamp, hose
910 0	4812 502 18383	Screw Torx T40 M 8X 25
910 5	4812 502 18516	Screw 4,2 x 13
930 0	4819 492 38139	Spring, suspension
941 0	4812 520 28004	Bearing, ball 6206
941 1	4812 520 28072	Bearing, ball 6303
953 0	4812 530 58099	Shaft seal 1200
961 0	4819 532 68829	Spacer
965 0	4812 466 68545	Cover BK/WH
993 0	4819 530 29028	Bow
993 3	4812 395 58004	Tool

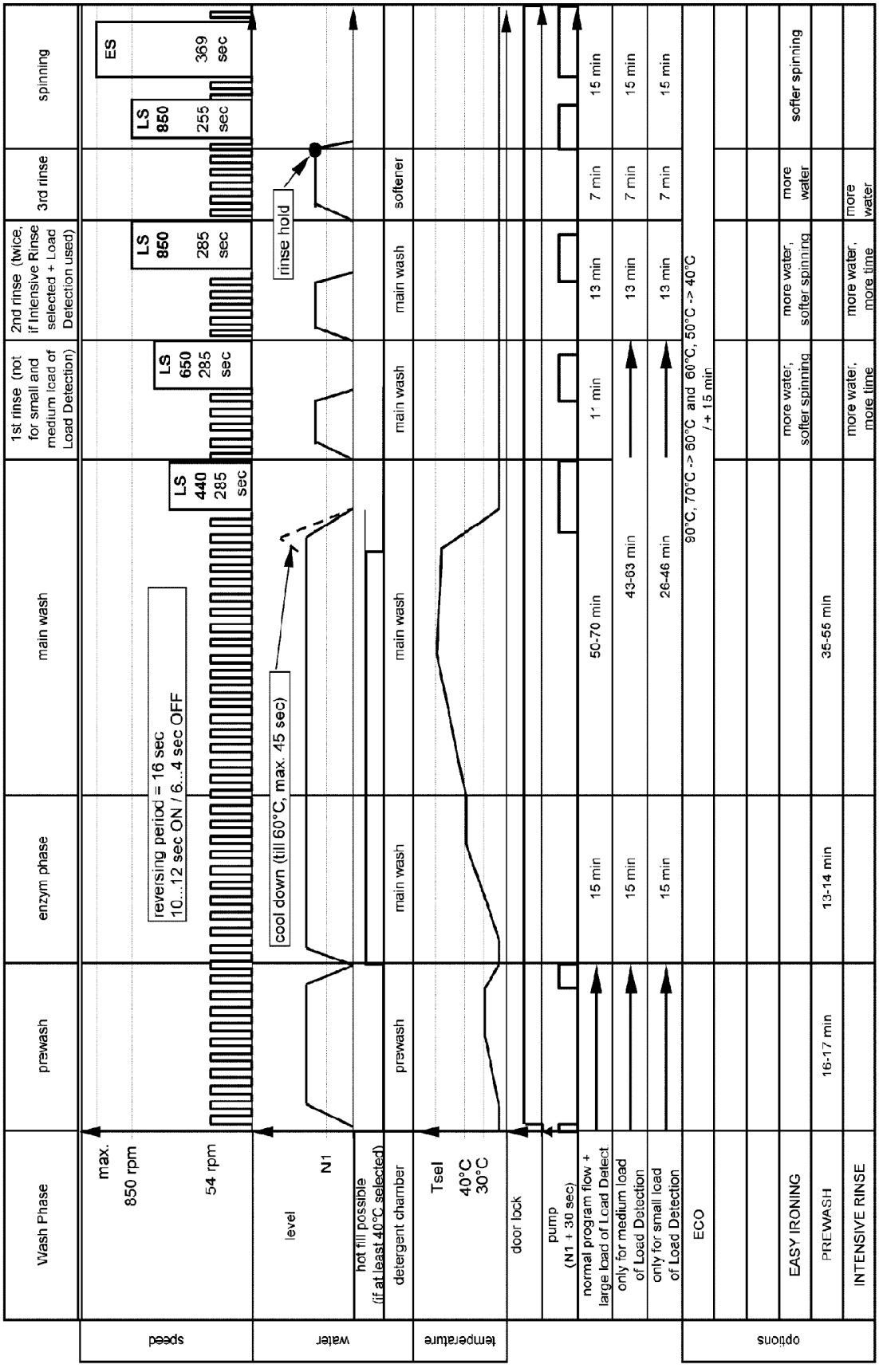
WIRING DIAGRAM



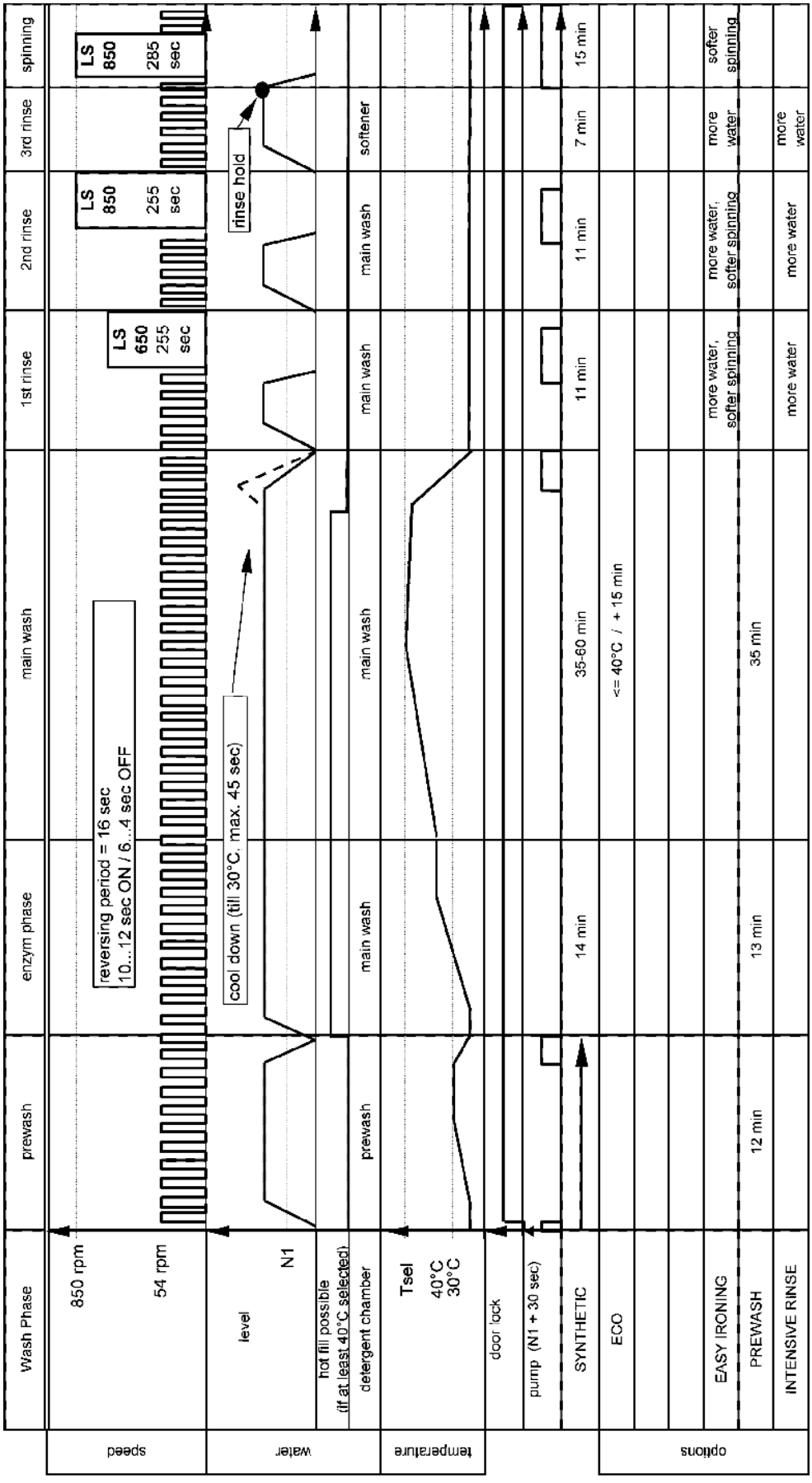
CIRCUIT DIAGRAM



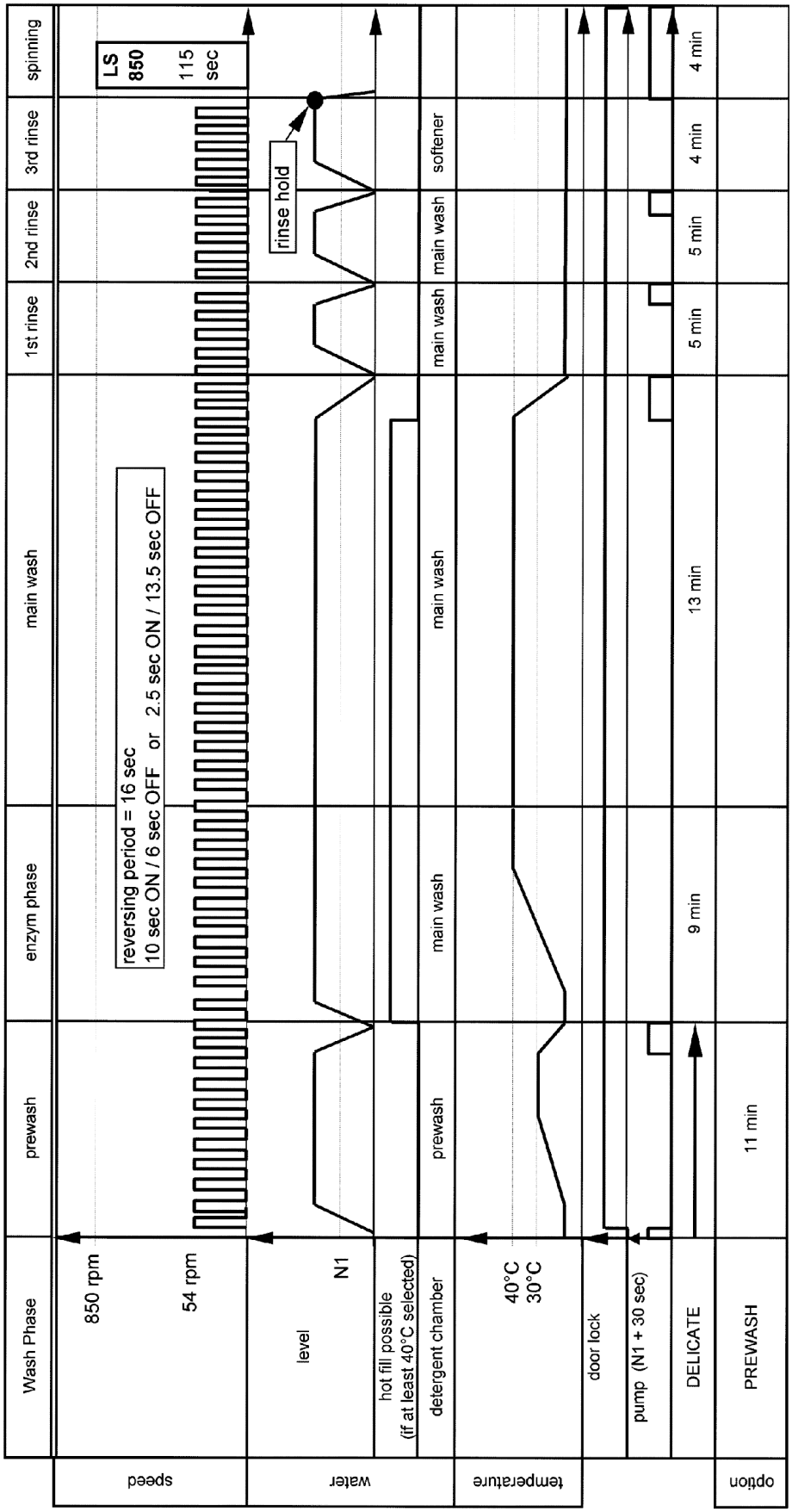
PROGRAM DIAGRAM - Cotton



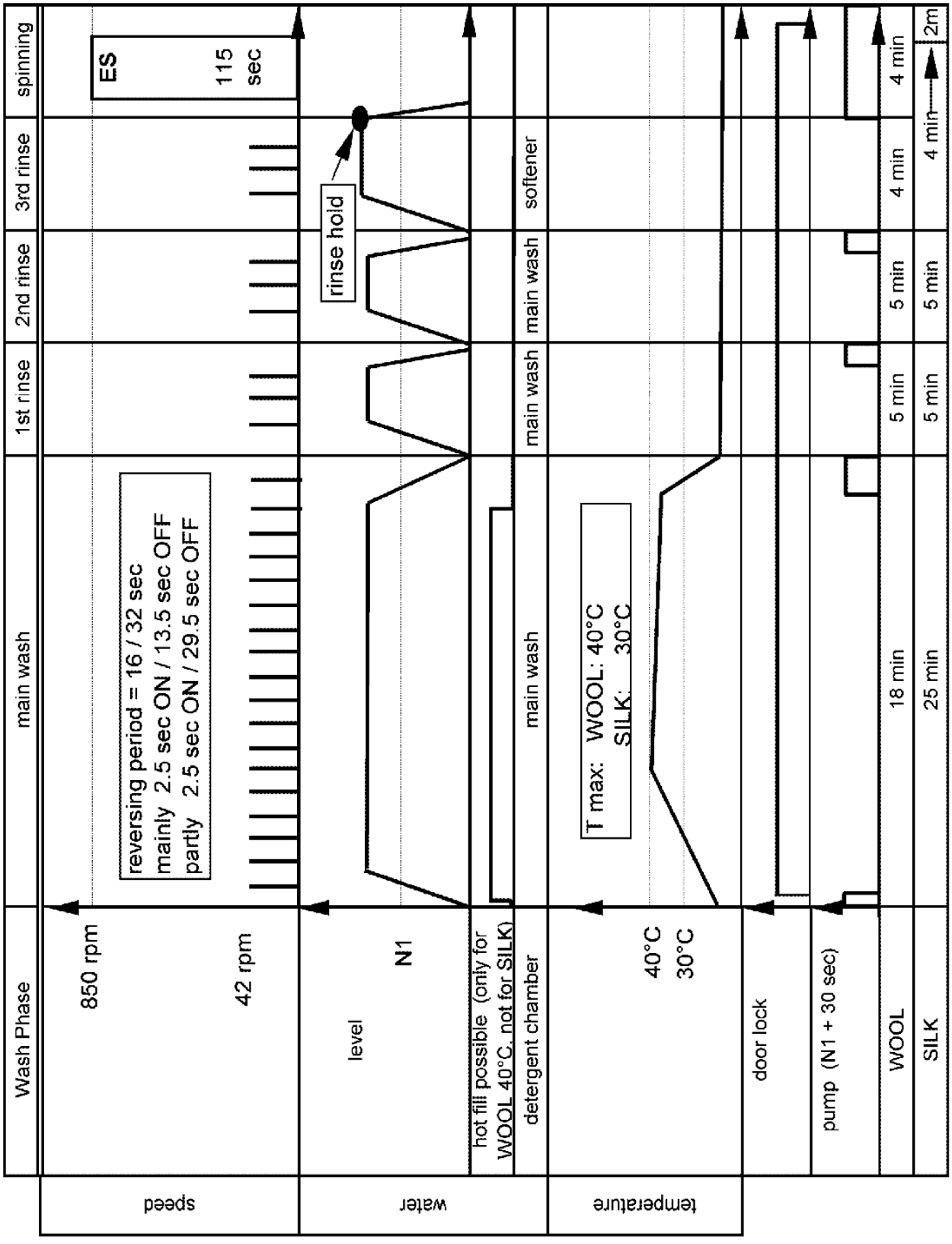
PROGRAM DIAGRAM - Synthetic



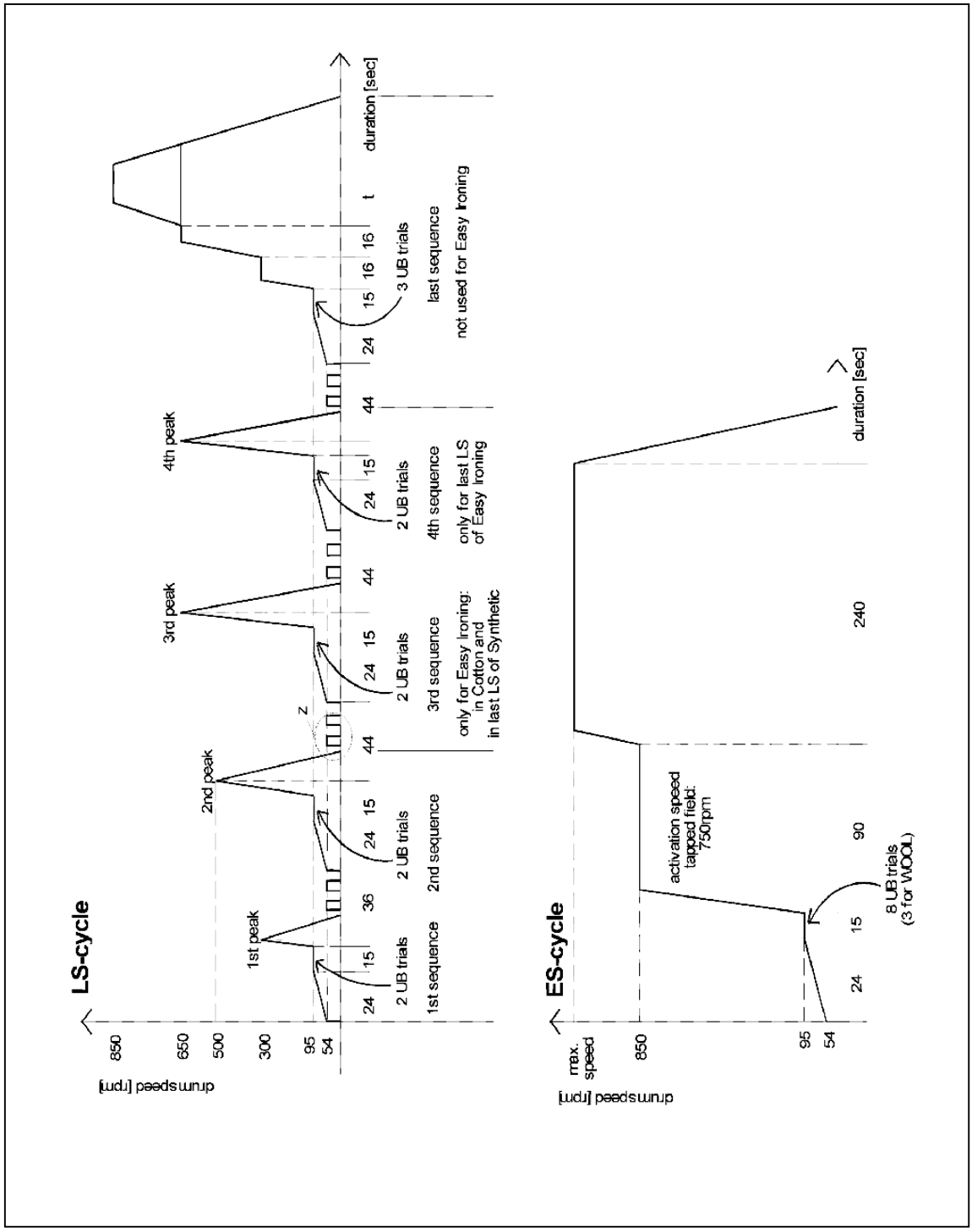
PROGRAM DIAGRAM - Delicate



PROGRAM DIAGRAM - Wool and Silk



PROGRAM DIAGRAM - Spinning Profiles



FAULT DIAGNOSIS

1. The diagnostic tests must be performed on the machine without a wash load because the out of balance detection system is disabled.

2. Set the cycle selector to "DRAIN"

3. Press the :
   a) "RINSE HOLD" button twice
   b) "INTENSIVE RINSE" button twice
   c) "START" button once,

4. The control panel will now display :
   - Temperature 60°C (Does not change for duration of the test sequence).
   - 1200 speed LED on (Does not change for duration of the test sequence).
   - "PREWASH" programme sequence LED on
   - "WASH" programme sequence LED on
   - "RINSE" programme sequence LED on
   - "RINSE HOLD" programme sequence LED on
   - "DRAIN/SPIN" programme sequence LED on - (This is Step 1 in the Table over)

5. Drain pump runs for approximately six seconds and the test sequence automatically advances to Step 2.

6. By pressing the Prewash button once, the timer advances to step 3

TEST SEQUENCE

Step	Advance to step by pressing : (See Note 1)	Pump Out or Fill Via :	Temperature	Time	Drum Rhythm	Component(s) Checked	LED *				
							P	W	R	RH	D
1	*Start*	Pump out	-	-	Stationary	Rinse hold and Intensive rinse buttons	●	●	●	●	●
2	*Advances automatically*	Prewash	Cold Fill No heat	60 s (fill)	Stationary	Prewash button and prewash fill	●	●	●	●	●
3	*Prewash button*	Main wash	Warm Fill No Heat	60 s (fill)	Stationary	Eco button and main wash fill	○	●	●	●	●
4	*Eco button*	Main wash	Warm Fill Heat to 90°C	60 s (fill) 25 min heat	10 s on, 6 s off	Heating circuit, NTC, leakage	○	●	●	●	●
5	*Auto (or press rinse hold button) (Note 2)*	Main wash	Cold fill No heat	55 s (fill)	80 s on, 2 s off	Easy ironing button	○	○	●	●	●
6	*Easy ironing button*	Fill via fabric softener	Cold fill No heat	60 s	80s on, 2s off	Fabric softener fill	○	○	●	●	●
7	*Rinse hold button*	Pump out	-		10s on, 6s off	Pump	○	○	○	●	●
8	*Advances automatically (Note 3)*	Pump out	-	6 min	Spin Max speed	Pump, spin	○	○	○	○	●

***Programme Sequence LED's:** P = Prewash W = Wash R = Rinse RH = Rinse Hold D = Drain

Note 1 Unless indicated by "Advances automatically", the test cycle can only be advanced by pressing the appropriate button once within five minutes, otherwise the machine will pump out and a false fault will be indicated.

Note 2. This part of the test sequence can be terminated after the fill by pressing the "Rinse hold" button but the NTC will not be checked for accuracy.

Note 3. This part of the test sequence can be terminated at any time by changing the cycle on the cycle selector then reselecting drain and press the start button. Once the machine is empty of water, the start button may be pressed and held until the start button light goes off to reset the timer ready for the next wash.

If a failure is detected during the test sequence the timer will :

1. initiate the safety step routine :

   A. Drain pump runs until pressure switch resets plus 30 seconds.

      I. Main motor is turned off.

      II. Water inlet valves are turned off.

      III. Element is turned off

2. Stop the machine and illuminate the speed indicator LED's in a pattern to indicate the fault code.

FAILURE DURING NORMAL OPERATION

If a failure is detected during normal operation, the machine will stop, the programme sequence LED where the failure occurred will flash and the speed indicator LED's will illuminate in a pattern to indicate the fault code.

FAULT CODES

Failure	1	3	5	6	7	9	11	14	16	18	20	21
Speed LED's	○	○	○	○	○	○	○	○	●	●	●	●
	○	○	○	○	○	●	●	●	○	○	○	○
	○	○	●	●	●	○	○	●	○	○	●	●
	○	●	○	●	●	○	●	●	○	●	○	○
	●	●	●	○	●	●	●	○	○	○	○	●

Fault	Detected Malfunction	Perform the following:
1	Water not entering or not detected	Check tap, cold inlet valve, pressure switch
3	Drain failure or not detecting empty drum	Check pressure switch, blocked drain, drain pump
5	NTC failure	Check NTC
6	Tachometer failure (no motor movement detected	Check motor
7	Circuit board failure (motor triac)	Replace timer
9	Drain failure	Check drain pump, pressure switch, blocked drain
11	Electronic failure	Replace timer
14	Electronic failure	Replace timer
16	Control failure	Replace timer
18	Control failure	Replace timer
20	Control failure	Replace timer
21	Control failure	Replace timer

ADJUSTING DISTRIBUTION NOZZLE

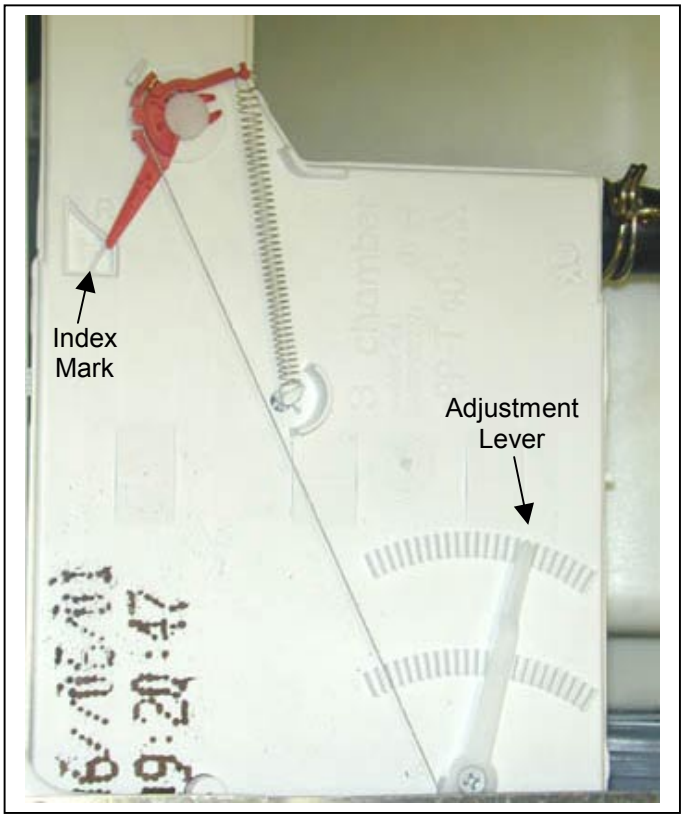
1. Select any COTTON wash cycle with the prewash off and wait until water begins to enter machine.

2. Turn the machine off at the power point.

3. Remove the machine lid.

4. Adjust the lever until the red pointer is over the index mark.

5. Replace the machine lid, turn on the power, open the detergent drawer slightly and make sure that water is only entering the main wash (middle) compartment and that no water is entering the fabric softener compartment.



TIMER CONNECTIONS